Contents

No. 1 (February 1985)

PAGE

Importance of the calving interval to milk yield in the following lactation of British Friesian cows. P. D. P. Wood 1

Changes in milk yield and composition at oestrus in dairy cows. R. I. Horrell, K. L. Macmillan, R. Kilgour and K. Bremner 9

Yield and composition of milk from Friesian cows grazing either perennial ryegrass or white clover in early lactation. D. J. Thomson, D. E. Beever, M. J. Haines, S. B. Cammell, R. T. Evans, M. S. Dhanoa and A. R. Austin 17

Chemical composition, rennet coagulation properties and flavour of milks from cows grazing ryegrass or white clover. A. S. Grandison, D. J. Manning, D. J. Thomson and M. Anderson 33

Interrelationships of chemical composition and coagulating properties of renneted milks from dairy cows grazing ryegrass or white clover. A. S. Grandison, G. D. Ford, D. Millard and M. Anderson . . . 41

The ^{31}P nuclear magnetic resonance spectrum of cows' milk. P. S. Belton, R. L. J. Lyster and C. P. Richards 47

Lipolysis and the distribution of lipase activity in bovine milk in relation to stage of lactation and time of milking. L. Ahrné and L. Björck . . 55

Heat stability of milk: the mechanism of stabilization by formaldehyde. H. Singh and P. F. Fox 65

Isolation and characterization of heat stable proteinases from *Pseudomonas* isolate AFT 21. L. Stepaniak and P. F. Fox 77

Inhibition by chelating agents of the formation of active extracellular proteinase by *Pseudomonas fluorescens* 32A. R. C. McKellar and H. Cholette 91

Proteolysis in milk: the significance of proteinases originating from milk leucocytes and a comparison of the action of leucocyte, bacterial and natural milk proteinases on casein. P. A. Grieve and B. J. Kitchen . 101

Lysin production by ϕC2(W), a prolate phage for *Streptococcus lactis* C2. W. M. A. Mullan and R. J. M. Crawford 113

Partial purification and some properties of ϕC2(W) lysin, a lytic enzyme produced by phage-infected cells of *Streptococcus lactis* C2. W. M. A. Mullan and R. J. M. Crawford 123

β-Casomorphin immunoreactive materials in cows' milk incubated with various bacterial species. U. Hamel, G. Kielwein and H. Teschemacher . . 139

Role of oxygen radicals in the bacteriostatic effect of whey and production of bacterial growth by free radical scavengers. T. Mattila 149

Effect of heat induced interaction between β-lactoglobulin and κ-casein on syneresis. M. J. Pearse, P. M. Linklater, R. J. Hall and A. G. Mackinley 159

Evaluation of a porous silica-based ion-exchange medium for the production of protein fractions from rennet- and acid-whey. P. J. Skudder . . 167

Use of liposomes for proteinase addition to Cheddar cheese. B. A. Law and J. S. King 183

Preservation of West African soft cheese by chemical treatment. O. C. Aworh and M. Egounlety 189

Nutritional value of yogurt. D. Hewitt and H. J. Bancroft . . . 197

Difficulties in measuring the syneresis of goat milk rennet curd by dilution of an added tracer. K. O. Nilsen and R. K. Abrahamsen 209

Fouling of whey proteins on stainless steel at different temperatures. P.-O. Hegg, H. B. Castberg and G. Lundh 213

Structure of the triacyl-*sn*-glycerols in the plasma and milk of the rat and rabbit. W. W. Christie 219

Viscosity of heated skim milk. K. R. Langley and D. M. Temple . . 223

No. 2 (May 1985)

Mammary uptake of amino acids and glucose throughout lactation in Friesland sheep. I. R. Fleet and T. B. Mepham 229

Quantification of β-casein in human milk. A. Chtourou, G. Brignon and B. Ribadeau-Dumas 239

Does β-lactoglobulin occur in human milk? G. Brignon, A. Chtourou and B. Ribadeau-Dumas 249

Influence of processing temperature and seasonal change in diet on lipase activity and lipolysis during the mechanical separation of bovine milk. E. C. Needs, M. Anderson, S. J. Payne and E. A. Ridout . . . 255

Comparison of the structure of micellar calcium phosphate in milk from six species by extended X-ray absorption fine structure spectroscopy. J. C. Irlam, C. Holt, S. S. Hasnain and D. W. L. Hukins . . . 267

Determining the energy of activation for the formation of lactulose in heated milks. G. R. Andrews 275

Cheddar cheesemaking with recombinant calf chymosin synthesized in *Escherichia coli*. M. L. Green, S. Angal, P. A. Lowe and F. A. O. Marston . 281

Effect of residues of five disinfectants in milk on acid production by strains of lactic starters used for Cheddar cheesemaking and on organoleptic properties of the cheese. D. G. Dunsmore, D. Makin and R. Arkins . 287

Microstructure of Kariesh cheese. M. H. Abd El-Salam and M. M Omar . 299

Size distribution of casein micelles in camels' milk. M. Z. Ali and R. K. Robinson 303

Some comments on the isolation of fat globule membrane material. P. WALSTRA 309

Milk production from grazed temperate grassland. J. D. LEAVER . . . 313

No. 3 (August 1985)

Foreword. G. C. CHEESEMAN and M. I. GURR 345

Effect of serotonin on the motility of smooth muscles in teats of lactating cows. G. VANDEPUTTE-VAN MESSOM, C. BURVENICH and G. PEETERS . . 347

An examination of teat drying with disinfectant impregnated cloths on the bacteriological quality of milk and on the transfer of *Streptococcus agalactiae* before milking. C. H. MCKINNON, T. M. HIGGS and A. J. BRAMLEY 355

Effect of reaming the papillary duct of cows' teats on keratin removal and penetrability of the duct to implanted *Escherichia coli* endotoxin. W. D. SCHULTZE and A. J. BRAMLEY 361

Plasmin activity and proteose-peptone content of individual milks. J. SCHAAR 369

Effect of ACTH and oxytocin treatment on lactoferrin and citrate in cows' milk. A. S. A. THOMAS and L. R. FELL 379

Chromatography of casein micelles and particles from homogenized milk on columns of controlled pore glass and large pore silica gel. E. ROBSON, D. S. HORNE and D. G. DALGLEISH 391

Products of the heat-promoted reaction between urea and the protein fraction of bovine milk. W. MANSON, T. CAROLAN and W. D. ANNAN . . . 401

Epimerization of lactose to free lactulose in heated model milk solutions. B. D. GREIG and G. A. PAYNE. 409

Particle size distribution and calcium content of batch-precipitated acid casein curd: effect of precipitation temperature and pH. M. S. JABLONKA and P. A. MUNRO 419

Effects of genetic variants of κ-casein and β-lactoglobulin on cheesemaking. J. SCHAAR, B. HANSSON and H.-E. PETTERSSON 429

Studies on the thermostability of lactase (*Streptococcus thermophilus*) in milk and sweet whey. N. A. GREENBERG, T. WILDER and R. R. MAHONEY . 439

Methods for making kefir and fermented milks based on kefir. V. M. MARSHALL and W. M. COLE 451

Anaerobic digestion of deproteinated cheese whey. J. DE HAAST, T. J. BRITZ, J. C. NOVELLO and E. W. VERWEY 457

Deterioration of pasteurized milk on storage. J. C. ALLEN and G. JOSEPH . 469

No. 4 (November 1985)

Professor M. I. Gurr, B.Sc., Ph.D. 489

Effect of stage of lactation on transport of colloidal carbon or *Staphylococcus aureus* from the mammary gland lumen to lymph nodes in guinea pigs. D. I. Schenkman, D. T. Berman and B. S. Yandell 491

NADP-linked dehydrogenases in secreted milk. M. R. Grigor and P. E. Hartmann 501

Purification and characterization of bovine milk fibronectin. T. N. Sato and M. Hayashi 507

Effect of the lactoperoxidase system on lipoprotein lipase activity and lipolysis in milk. L. Ahrné and L. Bjõrck 513

Nutrient content of milk and milk products: water soluble vitamins in baby milk formulae. K. J. Scott and D. R. Bishop. 521

Heat stability of milk; pH-dependent dissociation of micellar κ-casein on heating milk at ultra high temperatures. H. Singh and P. F. Fox . . 529

Centrifugal fractionation of homogenized milks. D. G. Dalgleish and E. W. Robson. 539

Effect of ripening cream with *Streptococcus lactis* subsp. *diacetilactis* on the flavour of ghee (clarified butterfat). J. S. Yadav and R. A. Srinivasan . 547

Effect of milk pretreatment and making conditions on the properties of Cheddar cheese from milk concentrated by ultrafiltration. M. L. Green. 555

Effect of elevated ripening temperatures on proteolysis and flavour development in Cheddar cheese. J. W. Aston, J. E. Giles, I. G. Durward and J. R. Dulley 565

Effect of variation in the composition of milk supply on the composition and quality of farmhouse Cheshire cheese. A. S. Grandison, M. Anderson, G. D. Ford, L. Newell and P. Lyon-Smith 573

Interrelationships between the diet fed to cows, composition and properties of milk and composition and quality of Cheshire cheese from farmhouse manufacturers. A. S. Grandison, M. Anderson, G. D. Ford and L. Newell 587

Diffusion test for the detection of streptomycin residues in milk. R. K. Yadavalli, R. S. Singh and S. K. Anand 595

Immune defences at mucosal surfaces in ruminants. R. F. Sheldrake and A. J. Husband 599